

WET

water environment and technology

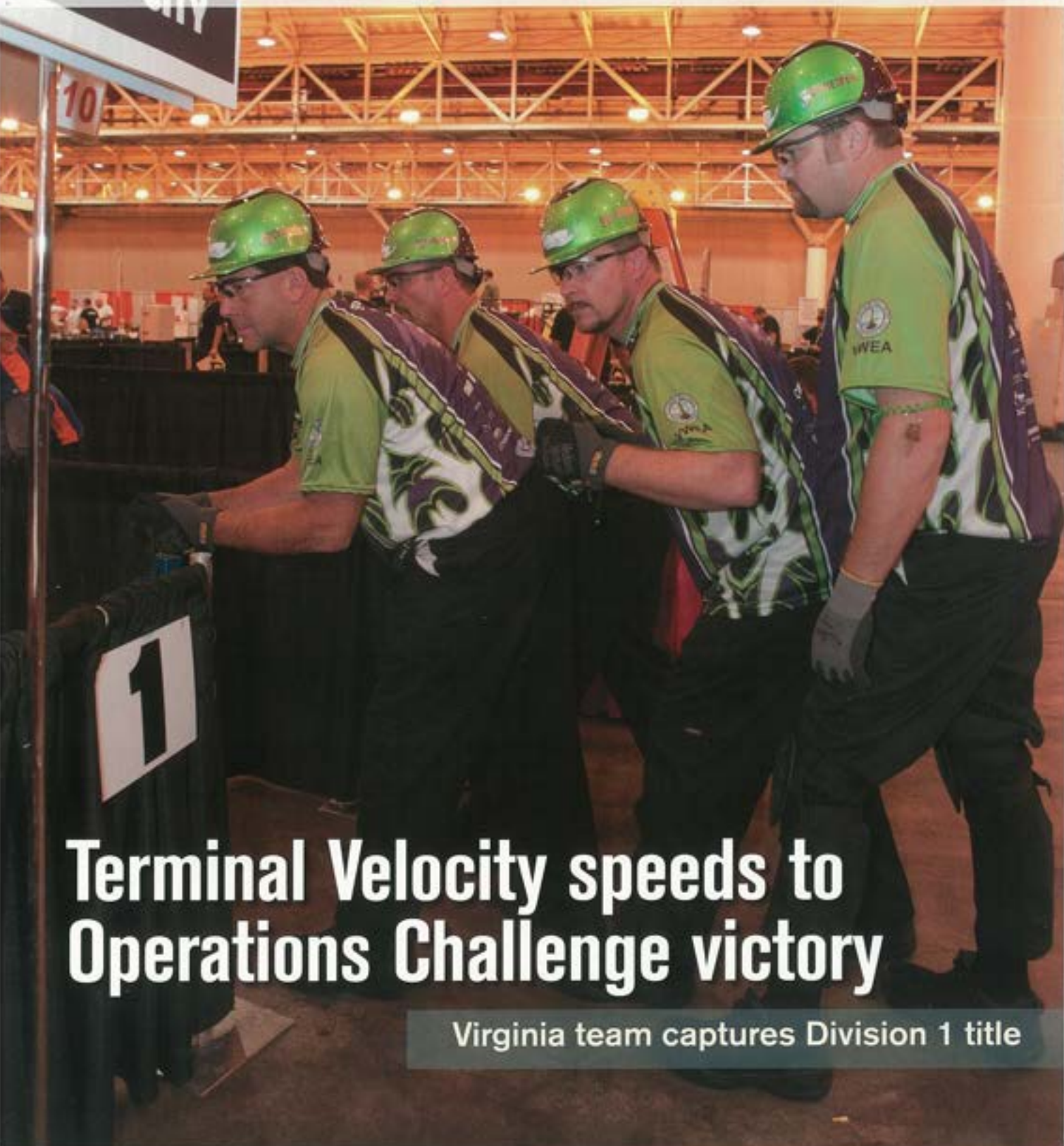
Runoff control

Biosolids & residuals

Energy management

Clarification

December 2010

A photograph showing four men in green and purple uniforms and hard hats participating in a relay race. They are running in a line, passing a baton. The background is an industrial setting with a large steel structure. A sign with the number '1' is visible on the left.

Terminal Velocity speeds to Operations Challenge victory

Virginia team captures Division 1 title



Terminal Velocity from the Virginia Water Environment Association eclipsed the competition in Division 1. The team – Jason Truitt and Stephen Motley (pictured) and Donnie Cagle and Paul Cubilla – won three first-place trophies (Collection Systems, Wilo Maintenance, and Laboratory), one second (Safety), and one third (Process Control). The team finished the competition more than 100 points ahead of the nearest team. Keffler Photography

of Virginia teams Operations

Terminal Velocity speeds ahead for Division 1 victory

The infectious excitement during Operations Challenge 2010 hit a peak as Terminal Velocity from the Virginia Water Environment Association finished its final event of the competition. With a shout of pure joy, one team member hoisted another to pump his fist in triumph after a good run.

Terminal Velocity – Donnie Cagle, Paul Cubilla, Stephen Motley, Jason Truitt, and coach Bobby Williams – took first place in Division 1 at the 23rd annual Operation Challenge held Oct. 4–5 at WEFTEC 2010 in New Orleans.

"It went really well for us," said Motley. "We did the best we could do." The team's best effort proved to be enough to take the top spot in Division 1.

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Division 1	Member Association	Final score
Terminal Velocity	Virginia WEA	465.83
LA Wrecking Crew	California WEA	362.03
Seacoast Sewer Snakes	New England WEA	361.78



This year's Division 2 winners, Team HRSD from the Virginia Water Environment Association, placed in every event. The team – Laura Shields, Eric Washbon, Chuck McMahon, and Tim Scott – earned second place in the Collection Systems Event, third place in the Safety Event, and first place in the Laboratory, Process Control, and Wilo Maintenance events. Kieffer Photography

dominate Challenge 2010

*Jennifer Fulcher with
Steve Spicer and
Steve Harrison*

Team HRSD's smooth operation clinches Division 2 win

Team HRSD from the Virginia Water Environment Association huddled together for a moment just before taking up starting positions for the Operations Challenge 2010 Safety Event. The event began and team members raced in different directions, each set on a specific task, moving as cogs in a well-oiled machine. The team's smooth operation earned the top spot in Division 2 at the national competition held Oct. 4–5 in New Orleans.

HRSD coach Wesley Warren predicted the team's win early

in the morning on the second day of the competition: "I have full confidence in this team," Warren said. "My goal is to make sure they're champions."

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Division 2	Member Association	Final score
Team HRSD	Virginia WEA	489.64
Dillo XXPress	WEA of Texas	431.28
Liquid Force	WEA of South Carolina	425.01

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Terminal Velocity, which took first in Division 2 in 2008 and second in Division 1 in 2009, beat the reigning Division 1 champions TRA CREWSers from the Water Environment Association of Texas for the top spot. Ranking in all events, with first-place trophies in the Safety, Collection Systems, and Laboratory events, Terminal Velocity obtained a 100-point lead over its competitors.

New Orleans has proven to be a good-luck location for Motley, who first competed in Operations Challenge at WEFTEC 2004 in New Orleans, where his team finished second in Division 2. Cagle also had good year in 2004, when his team, Fluid Dynamics, took first place in Division 1. Motley joined Cagle's team in 2005, Cubilla joined in 2008, and Truitt joined in 2009.

Terminal Velocity's strategy is to focus on consistency. The team's practice remained the same as the competition approached: meeting three to four times a week for 2 to 3 hours at a time, Motley said. The team also participated in the Spring Fling invitational hosted in Atlantic City by the New Jersey Water Environment Association, allowing team members to compete in a setting similar to the national competition, he added.



Richard Hamilton of Dillo XXPress measures out dilution water for filter rinses in the Laboratory Event. This year the event was redesigned; teams had to perform an *Escherichia coli* membrane filtration analysis. Dillo XXPress, which also includes Ash Bledsoe, Nathan Haywood, and Daniel Smith, earned second place overall in Division 2. Kettler Photography

Rewards of competition

While taking first place is satisfying, just participating has its own rewards, Motley said. The competition allows him to network, learn new things from other participants, learn about wastewater treatment processes that he isn't responsible for on the job, and hone his skills, he said.

"We love the camaraderie," said captain of LA Wrecking Crew, Paul Johnson. The LA Wrecking Crew – which includes Johnson, Jeff Valdes, Jesus Garibay Jr., Tom Jauregui, and coach Steve Johnson – earned second place overall in Division 1 this year.

Staying competitive

While the LA Wrecking Crew follows a practice regime similar to Terminal Velocity's, Johnson remarked on the benefits of watching other teams compete in the events. He gathers ideas of how to improve and takes them home to try when practicing for next year's competition, he said.

Because the LA Wrecking Crew includes two relatively new members – this was Jauregui's first and Garibay's second national competition – "we could have gone down to Division 2, but we didn't want to," Johnson said. The team

wanted to feel challenged and be proud of its accomplishments, he added. In addition to taking second place overall, the team placed second in the Collections Systems Event.

The Seacoast Sewer Snakes from the New England Water Environment Association round out the Division 1 winners, taking third place. The New Hampshire team also has found New Orleans to be a good-luck city; in 2004 the team finished first in Division 2, said captain Sean Greig. The other Sewer Snakes are Paul Fritz, John Sykora, Timothy Vadney, and coach Paula Anania.

The team used competing in two different regional competitions to fine-tune its strategy, Greig said. The competitions provide hands-on experience for the national competition, which is extremely important to the team since members come from four different locations and find it hard to schedule practice times, he said. The team also has limited equipment access to practice for some events, Greig added.

Taking skills back home

Operations Challenge is "a good opportunity to learn a lot more about the industry," said Vadney. "It's a challenge."

In addition to helping teams learn how to work with different equipment, the competition benefits participants because they can take the experience of working under pressure back to their jobs, Greig explained. "You actually train yourself how to do things faster and think more critically and be creative," he said. "Every day is kind of an Ops Challenge day at work because you're trying to think how to do things faster, better." ■



Jeff Valdes and Paul Johnson from the LA Wrecking Crew prepare to place the filter membrane in a Petri dish to complete the newly redesigned Laboratory Event. The team, which also includes Jesus Garibay and Tom Jauregui, earned second place overall in Division 1. Kieffer Photography

Division 2 continued from p. 33

Team HRSD members – Tim Scott, Chuck McMahon, Laura Shields, and Eric Washbon – credited their victory to preparation. “We’ve been practicing hard,” Washbon said. “Basically [our strategy is] just do what we’ve been doing in practice and bring it here.”

Hard work and focus, a winning combination

Team members practiced twice weekly to focus on improving on their weakest event from last year, maintenance, according to Washbon. “We’re ready to redeem ourselves,” he said prior to the event.

Their efforts paid off, with a first-place ranking in this year’s new Wlo Maintenance event. The wins didn’t stop there. The team placed in every event, with two other first-place trophies in the Laboratory and Process Control events. But Washbon and Warren know that the benefits of competing amount to more than trophies.

“I think it makes a more well-rounded person in terms of the knowledge of the equipment, knowledge of the processes,” Warren said. “It’s helped me so much in my career. I used to be pretty bad about leadership; now I’m the leader of my plant. It’s all about teamwork; I stress teamwork at work.”

“We study process; it makes us better operators,” Washbon added. Learning more about safety procedures, different types of equipment, and lab practices improves each competitor’s skills and comprehension of how different processes work, he said.

Practice makes perfect

Dillo XXPress – Ash Bledsoe, Richard Hamilton, Nathan Haywood, Daniel Smith, and coach Ellery Studivant – from the Water Environment Association of Texas also received recognition for their hard work, earning second place in Division 2.

“The team was very excited about the first place in Safety and second overall,” said Orren West, past team member and past coach for Dillo XXPress. The team prepared by practicing a couple

of times a week and spending some practice time with other teams from Texas.

West explained that the ability to remain consistent across the events and staying focused on the specific task, “one event at a time” is the key to doing well in the competition. “If you go into an event thinking of how you did in the previous event, you will be distracted,” he said.

Liquid Force from the Water Environment Association of South Carolina took third place in Division 2. Allan Clum, Greg Hill, Thomas Kohler, Troy Newton, and coach David Niesse make up the team. In addition to routine practices, the team also sought to understand the events fully.

“We practiced very hard throughout the summer months,” Newton said. “We set goals to understand the intent of the events, measured our progress, and refined components of the events to become better. We would change the placement of items and tools to make us think about what we were doing.” During practices the team tracked penalties and times and worked to fix any problems, and this year the hard work paid off, he said.

Valuable experiences and relationships

Experience gained and relationships made during Operations Challenge make it valuable, West said. “This is a great experience for utility employees to get really good training and meet other folks from around the country doing the same work they do on a daily basis.”

In addition to serving as a learning and networking tool for professionals from different states and countries, the event brings together people with different backgrounds and specialties, including operators, engineers, laboratory staff, and field personnel, Newton said. The competition allows teams, states, and the profession to be recognized.

“I love this challenge because it gives the ordinary guy, the everyday worker, a chance to be a national champion,” Warren said. ■

Sayre family supports Operations Challenge

For the Sayre family, Operations Challenge has become a family tradition. This year in New Orleans, three Sayres served as judges. Douglas Sayre along with his son, Dirk Sayre, 22 years old, and his nephew, Chris Sayre, 27 years old, all of whom work for Allied Technical Services Inc. (Cincinnati), judged the Wilo Maintenance Event.

The family has a long history of involvement with Operations Challenge, both at the state and national levels. Douglas first introduced Dirk to Operations Challenge when he was just 12 years old. That year, Dirk served as a judge for the Ohio Water Environment Association Operations Challenge. Chris's participation began after spending holidays and summers working for the family business.

"These guys will be taking over, so I wanted them to get involved," Douglas said. "I've never pushed either one of them, but the fact that they like this is great." He is content to know that his family will continue supporting WEFTEC and Operations Challenge, he said.

"It's interesting to see how everything works and get an appreciation for everybody that's out there running the water and wastewater industries," Chris said. "It's very rewarding when you know you've done something great. ... To be able to do it with the family is a great thing, too."

Showcasing underappreciated professionals

Douglas, a national-level judge for 10 years, supports the event because it recognizes people in the industry when most of the time no one recognizes their hard and important work. "In this business,

we aren't going to close; we can't shut down; we can't go home; we have to finish the job every day," Douglas said. "That's what I like about these guys. No matter how bad it gets ... they come back again and do it again. Almost every one of these teams is going the extra mile. They need to be recognized for that."

"I believe that this function does help a plant or a group of people form a better working relationship," Douglas said. "They learn more about each other's jobs and they respect each other more. They also appreciate each other more and understand what the other one needs." These things help improve the operation of water and wastewater treatment facilities, he explained.

Great responsibilities, great rewards

To be judges, "we have to know what they're doing and why they're doing it, so we can watch multiple things at the same time," Chris said. Douglas added that judges must spend time outside of the events making sure everyone understands the rules and scoring sheets to ensure a fair competition.

In previous state competitions, Douglas was responsible for obtaining, transporting, and setting up equipment and making sure the teams had time to practice on it. Participating at the state level helps the Sayres identify problems with the events themselves and fix them before the national competition, Douglas said.

One of the rewards of judging the event is watching teams grow and improve, Chris said. "Everything that they learn, they can take back to work with them and use," Dirk said. Knowing that competitors use what they learn to help improve operations is a reward in itself, he added. ■



A first place in the Process Control Event helped to propel the Seacoast Sewer Snakes from the New England Water Environment Association to a third-place win overall in Division 1. The team – Paul Fritz, John Sykora, Sean Greig, and Tim Vadney – outperformed their nearest competitors in the event by nearly 30 points. Kieffer Photography



Liquid Force from the Water Environment Association of South Carolina earned third place in the new Wilo Maintenance Event. The team – Troy Newton, Greg Hill, Tom Kohler, and Alan Clum – also earned a third-place trophy in the Collection Systems Event and third place overall in Division 2. Kieffer Photography

Honing the edge

Keeping Operations Challenge competitive

At its heart, Operations Challenge is about training. This year in New Orleans, 36 teams spread over two divisions spent 2 days at WEFTEC 2010 competing to prove who trained best.

To make sure competitors never stop learning and training, one or two of the events change each year.

"By changing events, it gives everyone the opportunity to learn new tasks on different equipment," said Jeff Pratt, outgoing chair of the Operations Challenge committee, which develops, organizes, and judges the events. Even if the specific equipment used isn't a match to what's at a competitor's plant, the experience of using new tools and gaining a better understanding of why things are done benefits competitors, he said.

"The first priority is, will the teams learn good basic information that can be applied to their facility," Pratt said.

New this year

This year the Wilo Maintenance and Laboratory events received complete overhauls.

In the Wilo Maintenance Event, competitors were required to respond to separate and simultaneous "moisture reset" failure

conditions for a submersible pump and a submersible mixer. The event uses a pump and motor manufactured by Wilo (Melrose Park, Ill.).

"The competition is designed specifically to measure those everyday skills that operators use," said Joe Melton, vice president of the water management segment for Wilo. He added that "big-picture items like teamwork, planning, safety, documentation, material control become second nature to the teams that compete in Operations Challenge."

This year the Laboratory Event required teams to perform an *Escherichia coli* membrane filtration analysis using the m-ColiBlue24 method from Hach Co. (Loveland, Colo.).

"Lab event coordinator, Mary Ann Pietrowicz [from Spotsylvania County (Va.) Utilities], recommended the m-Coli method because she's been using it in her lab and saw what a benefit it is and how it makes life easier for her lab," said Melissa Voronin, vertical market manager of municipal wastewater for Hach.

Evolving events

Next year, competitors will see changes to the Collection Systems Event, said John Troffater, incoming chair of the

Operations Challenge committee. The change will focus on the "younger generation's propensity to things with computers and being very computer-savvy," he said. This change will enhance the technological side of an event that already has a brute-force component – cutting through polyvinyl chloride pipe as fast as possible.

And perhaps the most changeable event each year is Process Control. While the format stays relatively the same, the scope of the event is extremely wide. This event helps the competitors expand their knowledge beyond their own jobs and facilities and encourages them to learn more about wastewater treatment, said Mike Ross, coordinator for the Process Control Event.

"Studying for the process exam, you look at everything," said Paul Johnson, captain of the LA Wrecking Crew. Competitors receive a list of topics to study, including some "you may not work on in your everyday assignment," he said. "But now you're studying ultraviolet disinfection or anaerobic digesters or denitrification."

"We try to make it an experience where an operator can really show us what they know in this field," Ross said.

Developing leaders

In addition to technical training, the competition also provides a training ground for leaders. Pratt is a good example of how Operations Challenge involvement grows into leadership responsibilities. In the early 1990s, Pratt began as a team member and coach for 3 years. He then served as a judge for several years and eventually took over the Safety Event – which he redesigned twice. Then he moved on to serve as vice chair and chair of the Operations Challenge committee.

He added that the leadership and organizational skills he developed throughout his Operations Challenge experience gave him the advantage when competing for new jobs.

"It's hard to create leaders," Troffater said. "It's easier to put people who have potential to be leaders into a position where they then can begin to lead, and that's what you see with this competition." ■

Written by Jennifer Fulcher with assistance from Steve Spicer and Steve Harrison.



Brian Lamar, Gordon Call, Ron Clements, and Jeff Kirkman of Utah Gold Flush from the Water Environment Association of Utah jump into action on the Safety Event. The team earned a second-place trophy for this event and the Wilo Maintenance Event, as well as a first-place trophy for the Collection Systems Event. Kieffer Photography



First-time competitors, the MASSerators from the New England Water Environment Association, represent a different kind of team. Barry Yaceshyn, Brian Farmer, Sean Kehoe, Tim Corrigan work for Weston and Sampson (Peabody, Mass.), which contracts with cities to operate and maintain their wastewater treatment plants. While most competitors work directly for cities, counties, or utility districts, Operations Challenge is open to all certified wastewater operators. Another first-time team, Ozark Royal Flush from the Arkansas Water Environment Association, also was comprised of contract operators, who work for CH2M Hill (Englewood, Colo.). Kieffer Photography

Results by event

Laboratory Event

Coordinator: Mary Ann Pietrowicz, Spotsylvania County Utilities (Fredericksburg, Va.)



Division 1 winners

1. Terminal Velocity (Virginia WEA)
2. TRA CREWSers (WEA of Texas)
3. Power SAWS (WEA of Texas)

Division 2 winners

1. Team HRSD (Virginia WEA)
2. OCWA Jets (WEA of Ontario)
3. Die-Jesters (Pennsylvania WEA)

Safety Event

Coordinator: Starlin Jones, City of Sparks, Nev.



Division 1 winners

1. Cape Shore Workers (New Jersey WEA)
2. Terminal Velocity (Virginia WEA)
3. Aqua Techs (WEA of Texas)

Division 2 winners

1. Dillo XXPress (WEA of Texas)
2. Utah Gold Flush (WEA of Utah)
3. Team HRSD (Virginia WEA)

Process Control Event

Coordinator: Mike Ross, CH2M Hill (Englewood, Colo.)



Division 1 winners

1. Seacoast Sewer Snakes (New England WEA)
2. TRA CREWSers (WEA of Texas)
3. Terminal Velocity (Virginia WEA)

Division 2 winners

1. Team HRSD (Virginia WEA)
2. Aurora's Ascending Aerobes (Rocky Mountain WEA)
3. Ozark Royal Flush (Arkansas WEA)

Collection Systems Event

Coordinator: T.J. Johnson, Delta Systems (Virginia Beach, Va.)



Division 1 winners

1. Terminal Velocity (Virginia WEA)
2. LA Wrecking Crew (California WEA)
3. Aqua Techs (WEA of Texas)

Division 2 winners

1. Utah Gold Flush (WEA of Utah)
2. Team HRSD (Virginia WEA)
3. Liquid Force (South Carolina WEA)

Wilo Maintenance Event

Coordinator: Tony Starks, Hampton Roads Sanitation District (Virginia Beach, Va.)



Division 1 winners

1. Terminal Velocity (Virginia WEA)
2. TRA CREWSers (WEA of Texas)
3. LA Wrecking Crew (California WEA)

Division 2 winners

1. Team HRSD (Virginia WEA)
2. Utah Gold Flush (WEA of Utah)
3. Liquid Force (South Carolina WEA)

For a slideshow of more photos from the competition, visit *WEF Highlights*

www.wef.org/highlights